

Name _____ Date _____

ROOTS AND RADICALS

Simplify each radical expression, if it is a real number

1. $\sqrt{289} =$	2. $\sqrt[3]{27} =$	3. $\pm\sqrt{100} =$
4. $\sqrt{0.36} =$	5. $\sqrt{(4x-3)^{10}} =$	6. $\sqrt[3]{27a^{24}b^9} =$
7. $\sqrt[3]{(2x+5)^{27}} =$	8. $\sqrt{25} =$	9. $\sqrt{196a^{14}b^6} =$
10. $\sqrt[3]{-216} =$	11. $\sqrt{(7x+8)^8} =$	12. $\sqrt{-144} =$
13. $-\sqrt{9} =$	14. $\sqrt{1.21} =$	15. $\sqrt[3]{125} =$
16. $\sqrt{25a^4b^{12}} =$	17. $\sqrt[3]{125a^{15}b^{12}} =$	18. $\pm\sqrt{169} =$
19. $\sqrt{-256} =$	20. $\sqrt[3]{-64} =$	21. $\sqrt[3]{-64a^6b^{18}} =$
22. $\sqrt[3]{(5x-9)^{18}} =$	23. $-\sqrt{225} =$	24. $\sqrt{a^2b^8} =$

Find the real solutions, if any, for each equation

25. $4x^2 - 36 = 0$	26. $3x^2 + 48 = 0$
27. $4x^3 = 108$	28. $2x^3 + 25 = -29$